# INDEX TO VOL. II.

N. B. New genera and species are in Italics.

## .

Аввот, J. H. Facts in electricity, 252. New experiment in Hydraulics, 265. On the tornado of Middlesex County, 285, 292.

Acanthosoma, gen., Owen, 217.

Acartia, gen., Dana, 10, 25.

laxa, D., 26.

limpida, D., 26.

negligens, D., 26.

tonsa, D., 26.

Africa, configuration of, 265.

Agassiz, L. On the fossil Cetacea of the United States, 4. Investigations upon Medusæ, 148. On the development of ova in insects, 181. On the egg, in Vertebrata, as a means of classification, 183. On the coloration of animals, 234. On the diversified functions of cells, 236. On the structure of the egg, 237. On Siluridæ, 238. On the scales of the Bonito, 238. On the Florida coral reefs, 262. On the Mansfield coal formation, 270. On the foundation of symmetry throughout the animal kingdom, 323.

Agatea, gen., Gray, 323.

violaris, Gray, 324.

Air, influence of, in the action of water upon lead, 86.

Alcohol, importance of, for light, 319, 322.

Aldebaran, occultation of, 258.

Alger, Francis. On crystals of gold from California, 246. On Sigillaria, 263.

Allorchestes, gen., Dana, 205.

australis, D., 206.
brevicornis, D., 207.
compressa, D., 205.
gracilis, D., 205.
graminea, D., 208.
hirtipalma, D., 205.
humilis, D., 206.
intrepida, D., 207.
Novi-Zealandia, D., 207.
Peruviana, D., 206.
verticillata, D., 205.

Alloys, analysis of, 195. Altona Observatory, 146. Amphitoë, gen., 213.

brevipes, D., 216.
fissicauda, D., 214.
fucorum, D., 216.
inæquistylis, D., 214.
Indica, D., 215.
peculans, D., 213.
peregrina, D., 216.
Peruviana, D., 215.
pubescens, D., 214.
rubella, D., 215.
tenuicornis, D., 215.
Tongensis, D., 216.

Anæsthetic agents, 148.

Aneroid barometer, 186.

Angles, trisection of, 146.

Annual meetings, 1, 158, 231, 266.

Anonaceæ, new genus of, 325.

Antaria, gen., 39.

crassimana, D., 39. gracilis, D., 40. obtusa, D., 40.

Apatite, 242. Argulidæ, fam., 53. Argyroxiphium, gen., 159.

macrocephalum, Gray, 160.

Asteroids, model of, 305.

Astrangia Danæ, 162.

Astridium, gen., Dana, 61.

orientale, D., 61.

Athenæum, Boston, room in, for the Academy, 301.

Aurora, connection of, with atmospheric electricity, 283.

Aztec children, 245.

B.

Barometer, Aneroid, 186.

Barometrical scales, 237, 243.

Bond, G. P. On Saturn's rings, 264. On two of the inner satellites of Saturn, 304.

Bond, W. C. On Mauvais's comet, 1. On an eighth satellite of Saturn, 4, 139. On the satellite of Neptune, 136. On Encke's comet, 138. On Petersen's second comet, 140. Moon culminations observed at Cambridge, 141. Double stars observed at Cambridge, 144.

Bone corpuscles, 257.

Bonito, on the scales of, 238.

Bosminidæ, fam., 47.

Boston Harbor, deterioration of, 261, 288.

Boundary between United States and Canada, 105.

BOWDITCH, H. I. On the animals and vegetable products found in the accumulations on the teeth, 183.

Bryology of the United States, 148.

BURNETT, WALDO J. On Spermatozoa, 238.

Burning-fluid, explosions of, 178, 311, 332.

Bust of Hon. John Pickering, 158.

C.

Cacteze, new, 8.

Calanidæ, fam., 9.

Calanus, gen., Leach, 10, 124.

affinis, D., 15.

amænus, D., 17.

VOL. 11. 43

Calanus, appressus, D., 17. arcuicornis, D., 12. attenuatus, D., 18.

bellus, D., 18.

communis, D., 17.

comptus, D., 11.

cornutus, D., 19.

crassus, D., 12.

curtus, D., 13.

elongatus, D., 18.

flavipes, D., 15.

furcicaudus, D., 12.

gracilis, D., 18.

inauritus, D., 16.

levis, D., 14.

Magellanicus, D., 12.

medius, D., 14.

mundus, D., 16.

nudus, D., 11.

pavo, D., 13.

pellucidus, D., 15.

placidus, D., 14.

recticornis, D., 14.

rostrifrons, D., 19.

rotundatus, D., 11.

sanguineus, D., 16.

scutellatus, D., 13.

setuligerus, D., 15. simplicicaudus, D., 16.

stylifer, D., 13.

tenuicornis, D., 15.

turbinatus, D., 12.

Caligacea, 53.

Caligeria, gen., Dana, 57.

bella, D., 57.

Caligidæ, fam., 53, 54.

Caliginæ, Dana, 54, 55.

Caligus, gen., 55.

Bagri, D., 57.

Caligus, gracilis, D., 56.

productus, D., 56.

Thymni, D., 56.

Calistes, gen., Dana, 57.

Trigonis, D., 57.

Candace, gen., Dana, 5, 22.

aucta, D., 24.

curta, D., 23.

Ethiopica, D., 23.

ornata, D., 23.

pachydactyla, D., 23.

truncata, D., 24.

Catopia, gen., 10, 25.

furcata, D., 25.

Cecropinæ, Dana, 54.

Cells, forming entire animals, 236.

Cetacea, fossil, of United States, 4.

Chagres, longitude of, 162.

CHANNING, W. F. Electrical phenomena during the aurora of September 29th, 283. On tornadoes, 290. On the electric fire telegraph, 299.

Charcoal, low point of ignition, 256.

Chart, old, of the mounds at Marietta, 220.

Cladocera, 47.

Clio, planet, 257.

Clydonia, gen., Dana, 219.

gracilis, D., 219.

longipes, D., 219.

Coast Marks, 111, 123, 184, 221, 225.

Coast Survey, Report on, 124.

Coats that form on lead, 92.

Cochituate water, its action on lead pipes, 65, 75, 79, 99.

Coloration of animals, 234.

Comet, discovery of a new, 110.

Comet, Encke's, 138.

Comet, Petersen's second, 140, 147.

Comet of Mauvais, 1.

Comet of April and May, 1849, 149, 158.

Comets, parts of our solar system, 147.

COMMUNICATIONS from

Abbot, J. H., 252, 265, 285, 292.

Agassiz, L., 2, 4, 136, 148, 158, 162, 180, 181, 183, 234, 236, 237, 238, 244, 262, 264, 269, 270, 323.

Alger, Francis, 246, 263.

American Association for the Advancement of Science, 163.

Bigelow, H. J., 162.

Bigelow, Jacob, 180, 316.

Blasius, Mr., 269.

Bond, G. P., 158, 264, 304.

Bond, W. C., 1, 4, 136.

Borden, Mr., 61.

Bouvé, T. T., 253.

Bowditch, H. I., 3, 183.

Bowditch, J. I., 301, 305.

Boyden, U. A., 262.

Breed, Mr., 196.

Cabot, E. C., 181.

Channing, W. F., 265, 283, 290, 299, 316.

Cross, Edmund B., 272.

Dana, J. D., 9, 124, 201.

Davis, C. H., 100, 261.

Deane, J., 162.

Desor, Edward, 105, 184, 221, 263, 282.

Emory, W. H., 161.

Eustis, H. L., 295, 298, 300.

Everett, Edward, 3, 4, 5, 110, 146, 147, 158.

Farrar, John, 325.

Foster, Mr., 131.

Frost, James, 129.

Gould, A. A., 284.

Gould, B. A., Jr., 112, 149, 151, 224, 297.

Graham, J. D., 105, 259.

Gray, Asa, 5, 159, 323, 325.

Guyot, A., 198, 199, 243, 265, 284.

Haldeman, S. S., 165.

Hall, James, 253.

Hayes, A. A., 195, 196, 199.

Herschel, John, 265.

Hill, Thomas, 262.

Holmes, O. W., 257, 326.

Horsford, E. N., 62, 178, 180, 181, 239, 253, 268, 295, 311, 332.

Jackson, C. T., 2, 111, 164, 184, 195, 221, 241, 249, 256, 261, 271, 299, 300, 316, 322.

Jenks, William, 267.

Lovering, Joseph, 105, 120, 129, 186, 244, 251, 293, 302.

Meredith, W. M., 225.

Mitchel, O. M., 164.

Mitchell, William, 258.

Navy, Secretary of, 3.

Paine, Mr., 199.

Parsons, Usher, 101.

Peirce, Benjamin, 111, 124, 146, 147, 197, 224, 225, 234, 235, 240, 241, 250, 255, 256, 258, 264, 271, 282, 285, 288, 289, 298, 310, 315.

Peirson, A. L., 311.

Pickering, Charles, 164, 225.

Shaw, Lemuel, 317.

Smith, A. W., 185.

Sullivant, W. S., 148.

Teschemacher, J. E., 198.

Treadwell, Daniel, 231.

Walker, S. C., 147, 235.

Warren, J. C., 250, 305.

Whitney, J. D., 250, 258.

Winthrop, R. C., 301.

Wyman, Jeffries, 164, 272.

Compositæ, new, 9, 159.

Conchacia, gen., Dana, 51.

agilis, D., 52.

brevirostris, D., 52.

inflata, D., 52.

rostrata, D., 52.

Conclusions relating to the different kinds of service pipe, 98.

Constants, new way of computing, 197.

Copilia, gen., 40.

mirabilis, D., 40.

quadrata, D., 40.

Copper, native, from Lake Superior, 195.

Coral reefs of Florida, 262.

Cormostomata, 53.

Corona about the moon, December 3d, 1851, 302.

Corophidæ, fam., 218.

Corophium, gen., 219.

quadriceps, D., 219.

Correction, 164.

Corycæidæ, fam., 35.

Corycæus, gen., 35.

agilis, D., 37.

concinnus, D., 39.

crassiusculus, D., 36.

decurtatus, D., 35.

deplumatus, D., 35.

gracilis, D., 35.

laticeps, D., 37.

latus, D., 38.

lautus, D., 37.

longicaudatus, D., 39.

longistylis, D., 36.

obtusus, D., 36.

orientalis, D., 37.

pellucidus, D., 38.

productus, D., 39.

remiger, D., 38.

speciosus, D., 38.

varius, D., 36.

venustus, D., 38.

vitreus, D., 37.

Crustacea of United States Exploring Expedition, 9, 201.

Ctenophoræ of Boston Bay, 149.

Currents of the ocean, 100.

Cycle, Egyptian, 164, 225.

Cyclopsina, gen., Milne Edwards, 10, 24.

calanina, D., 25.

gracilis, D., 25.

longicornis, D., 24.

tenuicornis, D., 25.

Cypridacea, 49.

Cypridina, gen., M. Edwards, 50.

formosa, D., 51.

gibbosa, D., 51.

luteola, D., 50.

olivacea, D., 51.

punctata, D., 51.

Cypris, gen., Müller, 49.

albida, D., 49.

Chilensis, D., 50.

pubescens, D., 50.

speciosa, D., 49.

Vitiensis, D., 50.

D.

Dam at Hadley, 180, 181.

Dams, theory of vibrations of, 224.

DANA, J. D. Crustacea of United States Exploring Expedition, 9, 201.

Daphnia, gen., 47.

australiensis, D., 48.

macrura, D., 48.

textilis, D., 47.

Daphniacea, 47.

Daphnidæ, fam., 47.

DAVIS, C. H. On the geological action of the tidal and other currents of the Ocean, 100. Deterioration of Boston Harbor, 261, 288.

Desor, Edward. On the origin of contorted strata of sand in diluvial deposits, 282.

Dichelestidæ, fam., 54.

Dinematura, gen., Latreille, 60.

braccata, D., 60.

Dinotherium giganteum, 305.

Discophoræ of Boston Bay, 149.

E.

Echinoderms, homologies of, 264.

Eclipse of the sun, September 17th, 1811, 325.

Egg, of Vertebrata, as a means of classification, 183.

Egg, structure of, 237.

Egyptian computation of time, 164, 225.

Electric current, velocity of, 224, 235.

Electrical experiment, 251.

Electrical facts, 252.

Electro-magnets, 106.

EMORY, W. H. Astronomical observations, 161. Magnetical and meteorological observations, 161, 162.

Enceladus, 304.

Encke's comet, 138.

Eppelsheim fossils, 305.

Ergasilidæ, fam., 54.

Erichthonius, gen., M. Edwards, 218.

macrodactylus, D., 218.

pugnax, D., 218.

Ethnology, linguistic, 165.

Euchæta, gen., Philippi, 10, 20.

communis, D., 21.

concinna, D., 21.

diadema, D., 21.

pubescens, D., 21.

EUSTIS, HENRY L. On the Middlesex tornado, 295, 298.

EVERETT, EDWARD. On the satellites of Saturn, 4, 5.

Exploring Expedition, works of, 124.

### F.

FARRAR, JOHN. On the solar eclipse of September 17th, 1811, 325. Fellows.

Abbot, Samuel L., 224.

Adams, C. B., 158.

Alexander, Stephen, 239.

Bouvé, T. T., 233.

Bowditch, Henry I., 3.

Burnett, Waldo J., 269.

Cabot, Edward C., 3.

Caswell, Alexis, 245.

Channing, W. F., 163.

Chauvenet, William, 245.

Coffin, J. H. C., 269.

Dixwell, Epes S., 3.

Eustis, Henry L., 224.

Fremont, John C., 239.

Gibbs, Wolcott, 182.

Guyot, Arnold, 123.

Haddock, Charles B., 255.

Haldeman, S. S., 224.

Hall, Jonathan P., 233.

Hubbard, J. S., 239.

Hunt, T. S., 272.

Jenks, William, 255.

Marsh, George P., 255.

Morse, S. B. F., 182.

Norton, John P., 267.

Norton, William A., 255.

Salisbury, Edward, 104.

Shepard, C. U., 158.

Shurtleff, Nathaniel B., 269.

Silliman, Benjamin, Jr., 267.

Warren, J. Mason, 104.

Whitney, J. D., 239.

Winthrop, R. C., 163.

Fellows of the Academy, classification and number of, 285.

FENDLER, AUGUSTUS. Plants of New Mexico, 5, 6.

Fire telegraph, electric, 299.

Fossils, Eppelsheim, 305.

Fossils from Sivâlik Hills, 250.

FOSTER, MR. On certain phenomena connected with the rise and fall of the waters of the Northern lakes, 131.

Foucault's experiment, 265, 268, 310.

Friction, rolling, theory of, 256, 258.

G.

Gahnite, 198.

Galvanic action of iron and lead, 89.

Gammaracea, 201.

VOL. II.

44

Gammaridæ, fam., 208.

Gammarinæ, 209.

Gammarus, gen., 209.

albidus, D., 210.

asper, D., 209.

emissitius, D., 211.

furcicornis, D., 211.

hirsuticornis, D., 210.

orientalis, D., 212.

pilosus, D., 213.

quadrimanus, D., 212.

setipes, D., 213.

Suluensis, D., 210.

tenellus, D., 212.

tenuis, D., 211.

validus, D., 212.

GAY, MARTIN, decease of, 223.

Gold, crystals of, 246, 249.

GORRY, DR. Apparatus for making ice, 300.

Gould, B. A., Jr. Observations on the planet Metis, 112. On the Comet of May, 1849, 149.

GRAHAM, J. D. Transit of Mercury, May 8th, 1845, 259.

GRAY, Asa. Plantæ Fendlerianæ Novi-Mexicanæ, 5. On Argyroxiphium, 159. On Wilkesia, 160. On new genera of the order Violaceæ, 323. On a new genus of Anonaceæ, 325.

GUYOT, A. On the configuration of the African continent, 265. On the Middlesex County tornado, 284, 289.

#### H.

Habitat of animals, 181.

HALDEMAN, S. S. On some points in Linguistic Ethnology, 165.

Hall, James. Investigations on Drummond's Island, 253.

Halos, 303.

HAYES, A. A. Analysis of alloys, 195. On the urinary red sand, 196. On Stereoptene, 199.

Hepaticology of the United States, 148.

Holmes, O. W. On the use of direct light in microscopic researches, 326.

Holothuria heros, Agassiz, 269.

HORSFORD, PROFESSOR. On the chemical action of water on lead and other pipes, 62. On the explosions of burning-fluids, 178, 311. On the spheroidal state of water, 180. On the spheroidal state of bodies, 239. On the permeability of metals to mercury, 295.

Hydraulics, new experiment in, 265.

I.

Ice, apparatus for making, 300.
Ice, columnar crystallization of, 221.
Icilidæ, fam., 219.
Icilius, gen., 220.

ovalis, D., 220.

Indian Mining at Lake Superior, 195.
Inscription in Island of Manānas, 267.
Insects, circulation in, 162, 180.
Insects, development of ova in, 181.
Institution, Smithsonian, 260.
Iphimedia, gen., Rathke, 217.
nodosa, D., 217.
simplex, D., 217.

Isle Royale, animals of, 184.

Isodendrion, gen., Gray, 324.

laurifolium, G., 324.

longifolium, G., 324. pyrifolium, G., 324.

J.

Jackson, C. T. On tellurium in gold ore, 2. On manganese in the water of streams, &c., 111. On coast marks, 221. On apatite, 242. Temperature at which charcoal takes fire, 256. Analysis of phosphate of lime, 261. On the explosion of burning-fluids, 316. On the use of alcohol, 322.

JENES, WILLIAM. On an inscription on a rock in the island of Mananas, 267.

Journal, Astronomical, 163.

L.

Languages, Aboriginal, of North America, 165.

Law of continuity, 120.

Lead Pipes, action of water upon, 62.

Lepeophtheirus, gen., 57.

Lepidopus, gen., Dana, 60.

armatus, D., 60.

Lernæacea, 53.

LIBRARY, donations to, by

Academia Naturæ Curiosorum, 157.

Academy of Berlin, 155, 280.

Academy, Danish Royal, 282.

Academy, Imperial, of St. Petersburg, 228.

Academy, Royal Irish, 152, 228, 277.

Academy of Natural Sciences, Philadelphia, 155, 230, 274.

Academy of Sciences, French, 230, 279.

Academy, Royal, of Sciences, of Stockholm, 226.

Academy of Vienna, 281.

Adams, C. B., 227, 229, 230, 276.

Airy, G. B., 278.

Association, American Medical, 275.

Association, American, of Geologists and Naturalists, 275.

Association, British, 227, 279.

Association, Mercantile Library, New York, 275.

Babbage, Charles, 288.

Bache, A. D., 123, 273.

Binney, Mrs., 276.

Blanchard, Emile, 279.

Bowditch, H. I., 229.

Bowditch, N. I., 276.

Brooke, Charles, 278.

Bureau, Topographical, 155.

Channing, W., 154.

Comptroller's Office, 157.

Cramer, Charles, 153.

Dana, J. D., 181, 227, 229.

Desor, Edward, 155, 231.

Emerson, Frederick, 153.

Everett, Edward, 151, 155, 156, 231.

Flügel, J. G., 156, 280.

Foster, J. W., 276.

Foucault, Leon, 280.

Gibbes, R. W., 228.

Girard, Charles, 277.

Gould, B. A., Jr., 153, 158, 226, 228, 230, 277, 281.

Government of the Netherlands, 154, 226, 281.

Government, Russian, 282.

Government, United States, 272, 273.

Graham, J. D., 230.

Greenough, W. W., 226.

Guyot, Arnold, 156.

Hall, James, 123, 153.

-Halliwell, J. O., 158.

Hamilton, W. R., 278.

Hausmann, J. F., 152, 280.

Institute, Netherlands, Royal, 282.

Institution, Royal, 278.

Institution, Smithsonian, 110, 152, 153, 155, 157, 274.

Jackson, C. T., 156, 276.

Jarvis, Edward, 231, 275.

Journal, Silliman's, 152, 153, 155, 157, 226.

Jubien, Victor, 227.

Leidy, Joseph, 156, 229, 276.

Liais, Em., 280.

Library, Astor, 275.

Lord, J. L. and H. C., 151.

Loven, S., 226.

Lyceum of Natural History of New York, 153, 156, 157, 274.

Maedler, J. H., 226.

Martins, C., 155.

Mason, Augustus, 157.

Melloni, M., 279.

Meneville, Guerin, 279.

Mitchel, Professor, 227.

Morton, S. G., 157, 276.

Museum, British, 279.

Museum d'Histoire Naturelle, 279.

Observatory, Prague, 153.

Observatory, Pulkova, 154.

Owen, Richard, 278.

Palfrey, J. G., 152.

Piddington, H., 153.

Poore, B. P., 152.

Quetelet, A., 280.

Quincy, Josiah, 276.

Raper, Henry, 278.

Ritter, Karl, 281.

Robb, Professor, 275.

Sabine, Edward, 278.

Sedgewick, Adam, 278.

Shurtleff, N. B., 275.

Smee, Alfred, 227.

Smithies, J. K., 278.

Smyth, W. H., 152, 229.

Société de Physique et d'Histoire Naturelle de Genève, 152, 230, 280.

Society, American Antiquarian, 152, 274.

Society, American Philosophical, Philadelphia, 156, 230.

Society of Northern Antiquaries, Royal, 282.

Society, Royal Astronomical, 230.

Society of Natural History, Boston, 229, 274.

Society of Natural History, Helvetian, 155.

Society of Natural History, Strasburg, 280.

Society, American Oriental, 157, 274.

Society, Royal, Göttingen, 152, 153, 281.

Society, Royal, London, 153, 228, 277.

Society of Sciences, Harlem, 281.

Society of Sciences, Royal, Upsal, 282.

Society, Zoological, London, 228.

Struve, F. G. W., 154.

Swett, S., 275.

Thurman, Jules, 279.

Ticknor, George, 228.

Tuomey, M., 228.

University of State of New York, Regents of, 152, 153, 156, 157, 229, 230, 274.

Vattemare, Alexander, 153, 227.

Von Boguslauski, Professor, 157.

Wayland, Francis, 155.

Whewell, William, 152.

Winthrop, R. C., 156, 227, 228, 229, 272, 273.

Yandell, L. P., 151.

Zantedeschi, F. C., 229.

Library of Dr. Bowditch, 182.

Light, direct, in microscopical researches, 326.

Lime, phosphate of, 242.

Lime, phosphate of, analysis of, 261.

Limnea, 3.

LOVERING, JOSEPH. On the causes of the differences in the strength of ordinary magnets and electro-magnets, of the same shape and size, 105. On the law of continuity, 120. On the aneroid barometer, 186. Electrical experiment, 251. On the connection of electricity with tornadoes, 293. On coronæ and halos, 302.

Lunar tables, new, 271.

Lynceus, gen., 48.

latifrons., D., 48.

Lysianassa, gen., 208.

Braziliensis, D., 208.

Lysianassinæ, fam., 208.

#### M.

Machinery for recording motions of the heavenly bodies, 164.

Mæra, gen., 212, 213.

Magnetical experiments, 120, 161, 162.

Magnets, causes of the difference of strength, when of the same size and shape, 105.

Manganese, in water of streams, 111, 164.

Mansfield coal formation, 270.

Mastodon longirostris, 306.

Mauvais's Comet, 1.

Mechanics, fundamental principles of, 111.

Medal, King of Denmark's, 3, 110, 147.

Medusæ, investigations on, 148.

Meetings, Annual, 1, 158, 231, 266.

Melita, gen., 214.

Members, classification of, 285, 297.

Members, foreign, choice of, 163, 182.

MEMBERS, Corresponding.

Hall, James, 3.

Le Conte, John L., 3.

Leidy, Joseph, 2.

MEMBERS, Honorary.

Andral, M., 182.

Baer, Karl Ernst von, 182.

Beaumont, Elie de, 182.

Bèche, Henry de la, 182.

Bischoff, T. L. W., 182.

Brown, Robert, 182.

Buch, Leopold von, 182.

Dumas, J. Baptiste, 182.

Ehrenberg, C. G., 182.

Encke, J. F., 182.

Fourneyron, B., 182.

Fries, Elias, 182.

Hansen, P. A., 182.

Jacobi, C. G. J., 233.

Jussieu, Adrien de, 233.

Louis, P. C. A., 182.

Melloni, M., 182.

Milne Edwards, 182.

Mitchell, Maria, 2.

Müller, Johann, 182.

Oersted, J. C., 182.

Ritter, Carl, 182.

Rokitansky, Carl, 233.

Rose, Henry, 182.

Schwamm, Theodore, 182.

Stephenson, Robert, 182.

Tiedemann, F., 182.

Memoirs of the Academy, distribution of, 5, 110.

Mercury, transit of, 259.

Metals, permeability of, to mercury, 295.

Meteorological observations, 198, 220, 225, 231, 244.

Metis, planet, observations on, 112.

Microscope, new horizontal, 326.

Microscopes, achromatic, 2.

Miracia, gen., 46.

efferata, D., 46.

gracilis, D., 46.

Miracidæ, fam., 46.

MITCHELL, WILLIAM. Occultation of Aldebaran, July 16, 1849, 258.

Monstrilla, gen., Dana, 53.

viridis, D., 53.

Monstrillacea, 53.

Moon Culminations, 141.

Moon, Daguerreotype of, 196.

Mounds, at Marietta, old chart of, 220.

N.

Neptune, ephemeris of, 147.

Neptune, satellite of, 136.

Niagara Falls, retrogression of, 105.

Nicothoidæ, fam., 54.

Nitrates, influence of, on the action by water on lead, 81.

Nogagus, gen., Leach, 58.

validus, D., 58.

Northern Lakes, rise and fall of waters in, 131.

Nymphacea, 53, 61.

O.

Occultations, 234.

Occultations of fixed stars, 185.

Œdicerus, gen., Kröyer, 217.

Novi-Zealandia, D., 217.

Officers, 2, 159, 233, 266.

Ophiura acufera, Agassiz, 269.

Optical illusion, 300.

Orchestia, gen., Leach, 202.

dispar, D., 204.

nitida, D., 204.

quadrimanus, D., 204.

VOL. II.

45

Orchestia rectimanus, D., 203.
scutigerula, D., 203.
serrulata, D., 204.
spinipalma, D., 203.
sylvicola, D., 202.
tenuis, D., 202.

Orchestidæ, fam., 201.
Orcula punctata, Agassiz, 269.
Organ, with perfect intonation, 226.
Ostracoda, 49.
Oxide of lead, solubility of, 93.

P.

Panama, latitude of, 161.

Pandarina, Dana, 54, 58.

Pandarus, gen., Leach, 59.

brevicaudus, D., 59.

concinnus, D., 59.

Satyrus, D., 59.

PARSONS, USHER. On a tornado near Providence, R. I., 101.

Peirce, Benjamin. Researches in analytical mechanics, 111. Report on the results of the United States Coast Survey, 124. On comets, 147, 235. On a new method of computing the constants of the perturbative function of planetary motion, 197. On the turbine wheel, 240. On the law of vegetable growth and the periods of the planets, 241. On the masses of the planets, 250. On the vis viva, 256. Theory of rolling friction, 256, 258. A case in the theory of probabilities, 282. Classification of the Fellows of the Academy, 285. Report on the Memoir of Lieutenant Davis on the deterioration of Boston Harbor, 288. On the Middlesex tornado, 289. On the surface of least extent, 298. On Foucault's experiment, 310.

Peirson, A. L. On explosion of burning-fluid, 311.

Pendulum experiment, 265, 268, 310.

Penilia, gen., Dana, 47.

avirostris, D., 47.

orientalis, D., 47.

Penilidæ, fam., 47.

Petersen's second comet, 140, 147.

Phonetics, essentials of, review of, 165.

Phyllobranchus, gen., Agassiz, 270.

PICKERING, CHARLES. Table of the Egyptian computation of time, 164, 225.

Planetary motion, perturbative function of, 241.

Planets, masses of, 250.

Planets, periods of, 241.

Planets, rings of, 264.

Plantæ Fendlerianæ Novi-Mexicanæ, 5.

Plants of New Mexico, 6.

Platygonus compressus, Le Conte, 1.

Polyphemidæ, fam., 47, 49.

Polyphemus, gen., 49.

brevicaudis, D., 49.

Pontella, gen., 10, 26.

acuta, Dana, 30.

acutifrons, D., 30.

agilis, D., 30.

argentea, D., 33.

brachiata, D., 27.

contracta, D., 28.

crispata, D., 29.

curta, D., 28.

detonsa, D., 33.

detruncata, D., 29.

elliptica, D., 27.

emerita, D., 31.

exigua, D., 30.

fera, D., 34.

frivola, D., 33.

hebes, D., 32.

media, D., 29.

perspicax, D., 32.

plumata, D., 27.

princeps, D., 34.

protensa, D., 32.

regalis, D., 31.

rubescens, D., 31.

Pontella simplex, D., 29. speciosa, D., 34. strenua, D., 32. turgida, D., 28. Pyctilus, gen., 218.

R.

Rain, at a very low temperature, 262.

REPORT on the offer of the Boston Athenæum, 301. On the classification of the Fellows and Members of the Academy, 285. On coast marks, 221. On United States Coast Survey, 124. On Lieutenant Davis's paper, 288. On Professor Eustis's plan of the Middlesex tornado, 301. On meteorological observations, 231. Of Rumford Committee on a communication of Mr. Frost, 129. On the Statutes, 163.

Richella, gen., Gray, 325.

monosperma, G., 325.

Rumford Committee, 129, 199, 226, 272.

Rumford, Count, letters of, 245.

S.

Sand strata, distortion of, 282.
Sapphirina, gen., 40.

angusta, D., 41.
bella, D., 44.
coruscans, D., 41.
detonsa, D., 43.
elongata, D., 41.
gemma, D., 44.
inæqualis, D., 42.
indigotica, D., 43.
iris, D., 41.
metallina, D., 41.
obesa, D., 45.
obtusa, D., 46.

opalina, D., 45. orientalis, D., 43.

Sapphirina ovalis, D., 42.

ovata, D., 42.

ovato-lanceolata, D., 44.

splendens, D., 42.

tenella, D., 45.

versicolor, D., 45.

Saturn, eighth satellite of, 4, 5, 139, 147.

Saturn, rings of, 264, 265.

Saturn, Satellites of, 304.

Saturn, theory of, 255.

SCHUMACHER, PROFESSOR, position of, 146. Death of, 255, 262, 266.

Scribella, gen., Dana, 10, 19.

abbreviata, D., 20.

scriba, D., 20.

setiger, D., 20.

Segments of Crustacea, table of, 55.

Service-Pipes, metallic, 95.

Shaw, Lenuel. On the explosion of burning-fluids, 317: and the importance of alcohol, 319.

Sida, gen., 48.

angusta, D., 48.

Sigillaria, 263.

Siluridæ, 238.

Smithsonian Institution, 260.

Solar index, 61.

Specilligus, gen., Dana, 58.

curticaudus, D., 58.

Spermatozoa, 238.

Spheroidal state of bodies, 239.

Spica, a double star, 235.

Stars, double, 144.

Stars, fixed, occultations of, 185.

Statutes, amendments of, 163, 297.

Staurophora, new species of, 149.

Steam, properties of, 129.

Stenia, gen., Dana, 209.

Magellanica, D., 209.

Stereoptene, 199.

Struvite, 198.

Strychnine, phenomena of death from, 181. Surface of least extent, 298. Symmetry, animal, foundation of, 323. Synapta coriacea, Agassiz, 269. System, decimal, of weights and measures, 244.

T.

Talitronus, gen., Dana, 202.
insculptus, D., 202.
Talitrus, gen., Latreille, 201.
gracilis, D., 201.

gracilis, D., 201. Novi-Zealandiæ, D., 201. ornatus, D., 201.

Teeth, accumulations on, 183.
Telegraph, electric, recording of, 284.

Telegraph, fire, 299. Tellurium, 2. Tethys, 304.

Theory of internal fire in heavenly bodies, 272.

Thermometrical scale, 237, 243.

Tiaropsis diademata, 149.

Tidal currents, 100.

Titanium, nitruret of, 253.

Tornado in Middlesex County, theory of, 269, 284, 285, 289, 298, 301. Tornado, near Providence, R. I., 101, 291.

TREADWELL, PROFESSOR. Report of committee on meteorological observations, 231.

Troglodytes gorilla, 164.
Turbine wheel, 240.

U.

Undina, gen., Dana, 10, 22.
inornata, D., 22.
simplex, D., 22.
vulgaris, D., 22.
Urinary red sand, 196.
Uristes, gen., Dana, 209.

gigas, D., 209.

V.

Vermillion, adulterations of, 184.

Vertebrata, first appearance of, in geological strata, 263.

Vesication, nature of, 196.

Victoria, planet, 257.

Violaceæ, 323.

Vis inertiæ, 256.

Vis viva, 256.

## W.

WALKER, S. C. On the velocity of electricity, 235.

WARREN, JOHN C. On the Eppelsheim fossils, and Dinotherium giganteum, 305.

Water, action of, on lead pipes, 62.

Water, spheroidal state of, 178, 180.

Water-level of United States coast, marks to indicate, 111, 123, 184, 221, 225.

Weights, French system of, 244.

Wilkesia, gen., Gray.

gymnoxiphium, G., 160.

THE END.